What is claimed is:

1. A CMOS image sensor single chip integrated with a mcro processing unit, comprising:

a complementary metal oxide semiconductor (CMOS) image sensor, used for detecting an input light as digital image signal; and

a micro processing unit, used for receiving said digital image signal which is further processed to be an application signal to be outputted.

2. The CMOS image sensor single chip integrated with a micro processing unit of claim 1, wherein said CMOS sensor comprises:

an image sensing array, used for receiving said input light and transferring said input light to a sensing voltage;

a readout circuit, used for reading said sensing voltage and outputting said sensing voltage as an analog image signal;

a timing control circuit, used for controlling working timing of said image sensing array and said readout circuit; and

an analog to digital converter, used for receiving said analog image signal and transferring said analog image signal to said digital image signal.

3. The CMOS image sensor single chip integrated with a micro processing unit of claim 2, wherein said readout

circuit is formed of a column-readout circuit and a row-readout circuit.

4. The CMOS image sensor single chip integrated with a micro processing unit of claim 2, wherein said readout circuit further comprises a pre-amplify unit, used for amplifying said sensing voltage as said analog image signal.

5. The CMOS image sensor single chip integrated with a micro processing unit of claim 1, wherein said micro processing unit comprises an image compression module, used for compressing said digital image signal to be said application signal to reduce data capacity.

6. The CMOS image sensor single chip integrated with a micro processing unit of claim 1, wherein said micro processing unit comprises a image compression module, used for compressing said digital image signal to be said application signal to reduce data capacity; said micro processing unit further comprises a image de-compression module, used for de-compressing said compressed application signal to recover to be said digital image signal.

7. The CMOS image sensor single chip integrated with a micro processing unit of claim 1, wherein said CMOS image sensor is a linear CMOS image sensor.

8. The CMOS image sensor single chip integrated with a micro processing unit of claim 7, wherein said CMOS

sensor comprises:

a linear CMOS image sensor, used for receiving said input light and transferring said input light to a sensing voltage;

a readout circuit, used for reading said sensing voltage and outputting said sensing voltage as an analog image signal;

a timing control circuit, used for controlling working timing of said image sensing array and said readout circuit; and

an analog to digital converter, used for receiving said analog image signal and transferring said analog image signal to said digital image signal.

9. The CMOS image sensor single chip integrated with a micro processing unit of claim 8, wherein said readout circuit further comprises a pre-amplify unit, used for amplifying said sensing voltage as said analog image signal.

10. The CMOS image sensor single chip integrated with a micro processing unit of claim 7, wherein said micro processing unit comprises a barcode-decoding module, used for decoding barcode pattern sensed by said CMOS image sensor to be said application signal.

11. The CMOS image sensor single chip integrated with a micro processing unit of claim 7, wherein said micro

processing unit comprises a barcode-decoding module, used for decoding said barcode pattern sensed by said CMOS image sensor to be said application signal, taking out voice data of a outside voice memory connected with said micro processing unit corresponding to said application signal, and outputting said voice data to a digital to analog converter (DAC) to output to a microphone and transform to be a voice.

12. The CMOS image sensor single chip integrated with a micro processing unit of claim 7, wherein said micro processing unit comprises a barcode-decoding module, used for decoding said barcode pattern sensing by said CMOS image sensor to be said application signal, taking out voice data of a outside voice memory connected with said micro processing unit corresponding to said application signal, and outputting said voice data to a digital to analog converter (DAC), to output to a microphone and transform to be a voice; said micro processing unit further comprising a image processing module, used for taking out said image data corresponding to said application signal in said image memory connected outside said micro processing unit, to output to a display and transform to be displayed.

13. The CMOS image sensor single chip integrated with a micro processing unit of claim 1, wherein said micro

processing unit is a micro controller unit (MCU).

14. The CMOS image sensor single chip integrated with a micro processing unit of claim 1, wherein said micro processing unit is a microprocessor.

15. The CMOS image sensor single chip integrated with a micro processing unit of claim 1, wherein said micro processing unit is a digital signal processor (DSP).

16. A CMOS image sensor single chip integrated with a micro processing unit, comprising:

a complementary metal oxide semiconductor(CMOS) image sensor, used for detecting an input light as digital image signal and

a micro processing unit, used for controlling exposure and readout time of said CMOS image sensor, and receiving said digital image signal which is further processed to be an application signal to be outputted.

17. The CMOS image sensor single chip integrated with a micro processing unit of claim 16, wherein said CMOS sensor comprises:

an image sensing array, used for receiving said input light and transferring said input light to a sensing voltage;

a readout circuit, used for reading said sensing voltage and outputting said sensing voltage as an analog image signal; and

an analog to digital converter, used for receiving said

analog image signal and transferring said analog image signal to said digital image signal.

18. The CMOS image sensor single chip integrated with a micro processing unit of claim 17, wherein said readout circuit is formed of a column-readout circuit and a row-readout circuit, and said CMOS image sensor further comprises a timing control circuit which determines readout sequence of said readout circuit.

19. The CMOS image sensor single chip integrated with a micro processing unit of claim 17, wherein said readout circuit further comprises a pre-amplify unit, used for amplifying said sensing voltage as said analog image signal.